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ABSTRACT

In a study of the use of videotaping to modify teacher behaviors, five teachers in a reading and learning skills center were filmed in interaction with students; they then observed and measured their own "on-task" and "off-task" behaviors while viewing a series of taped sessions. A control group of two teachers had pretest and posttest filming only. This paper explains the study procedures and provides examples of three measures used: a questionnaire that measured teachers' attitudes toward the videotaping before and after the study; "on-task" and "off-task" checklists that measured the teachers' knowledge of appropriate and inappropriate behaviors; and tally sheets on which teachers recorded their observed behaviors at ten-second intervals. The paper then presents the study results, which revealed that both the control and experimental groups increased their percentages of on-task behavior from pretest to posttest filmings and that teachers in the experimental group found the use of videotaping very helpful in improving teaching behaviors. Tables of collected data are included. (GW)

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THE USE OF VIDEO TAPE TO REACH CRITERION PERFORMANCE:

A Self-Shaping Teacher Training Procedure

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Videotape Feedback

The use of videotaping, microteaching and self-confrontation in producing behavioral changes in teacher trainees has been evaluated in a number of studies (McDonald, 1973). Many different approaches to achieve behavioral changes have been examined and many of them have been used with moderate success. Reviews of research on the use of videotaping as a means of feedback have been presented by McDonald and Allen (1967) and more recently by McDonald (1973). Studies have revealed that consistent behavioral change in teachers results from training procedures employing self-viewing of videotapes. Furthermore, feedback appears to be most effective with easily observed and reinforceable teaching behaviors.

A summary of previous literature, relating to teacher-training techniques and "self-confrontation," covering the years 1958-1972 by Fuller and Manning (1973) indicates that the confrontation should be focused and facilitative. Confrontation which was not accompanied by some focus may be provided by another person, by instruction, or even by the goal implicit in the situation. In some instances, it was found that the content of the focus might influence the outcome of the confrontation in the sense that what is focused upon is what is changed.

Additional studies indicate that optimal conditions for change include: a typical (rather than unusual) performance situation, a psychologically safe playback situation, and an unambiguous feedback system. Ramsey (1969) also concluded that reading teachers may profit from viewing video tapes of the reading sessions they have conducted. The influence of viewing the tapes on their subsequent teaching behavior was substantial. This study extends the prior work by defining "focus" as "on task" behavior of teachers.

Setting. The University of Michigan Reading and Learning Skills Center, elementary and secondary program, has approximately 100 clients referred per

year. Although, the clients referred to the Center range in age from 5 to 50 years, the majority are between 7 and 16 years. These clients, referred by classroom teachers, school specialists, or parents, have difficulty in mastering the basic skills necessary for learning to read or the skills necessary for writing, spelling, study skills or self-management. Graduate students who constitute the staff are all certified teachers enrolled in a three month practicum in diagnosing and prescribing for reading and study deficits. The course requires a nine-week teaching experience including diagnostic evaluations, program planning and instructional design.

This operation provided an opportunity to determine the usefulness of feedback via videotape on teacher clinical behavior.

DESCRIPTION OF STUDY

The behaviors of reading and learning disability teachers were to be modified by using videotaping as a source of visual feedback. This study differs from previous ones in several ways. Filming was done through a one-way window, eliminating the possibility of disrupting the classroom. The subjects were not given a model of effective teacher behavior prior to their teaching sessions. They observed and measured their own "on-task" and "off-task" behavior while viewing the previously taped sessions. On-and off-task was defined by a list of activities. (Figure 1)

Over 1500 articles in the literature identify, describe or define approximately 500 teaching behaviors. Commonly occurring or disruptive behaviors were identified and constitute a definition of "off-task" teacher behaviors. Facilitative behaviors constitute "on-task." (Figure 1) These behaviors were selected arbitrarily.

Videotape Feedback

Name: Date:

Label each one as either an "On-Task" or "Off-Task" behavior.

	KEY
Reviewing students' work	_____(on)
Reading or writing for personal use	_____(on)
Responding to irrelevant behavior	_____(off)
Ignoring irrelevant behavior	_____(on)
Listening to (Doing an Oral Reading Exercise)	_____(on)
Hovering over student who is on or off task	_____(off)
Doing nothing	_____(off)
Waiting for student to complete task	_____(off)
Indirect observation of student performance (less than 1 minute)	_____(on)
Writing lesson plans	_____(on)
Fixing nails	_____(off)
Supplying word in an oral reading exercise before student asks	_____(off)
Failure to enforce a rule	_____(off)
Answering relevant questions	_____(on)
Reinforcing desirable behavior	_____(on)
Direct observation of student performance (more than 1 minute)	_____(off)
Answering irrelevant questions	_____(off)
Enforcing a rule	_____(on)

Figure 1. "On-Task and Off-Task" teacher Behavior Checklist used as a standard of relevant teaching behaviors.

SUBJECTS

The subjects were seven certified teachers completing graduate programs involving a practicum experience in diagnosing reading deficits and in prescribing behavioral objectives and instructional design. Two of the subjects had only pre-teaching experience. The study also included fifteen clients, five girls and ten boys who were referred to the Reading and Learning Skills Center by parents, public or parochial schools. The average age of the clients was 9 years. The videotapings were conducted by the investigators.

PROCEDURE

Initial testing was begun the third week of the instructional program. Permission was obtained, prior to filming, from the teachers and the parents of the clients, asking them to participate in a pilot study of videotape feedback. The purpose was described as modifying teacher behavior and modeling appropriate attending behavior for the clients. All of the teachers and clients agreed to participate.

Three measures were used. First, a pre and post survey was designed which measured the teachers' feelings and attitudes about being filmed and their opinions as to the value of the project. They expressed their views on a scale of 1-5 ranging from "apprehensive" to "enthusiastic" for feelings and attitudes about being filmed and from "useless" to "very helpful" for their opinions about the value of the project.

The second measure was the "On-Task and Off-Task" teacher behavior checklist on which the teacher identified tasks as appropriate or inappropriate behavior. This, then, became the criterion for "On and Off-Task" behavior when viewing their own films.

The third measure was a 10 minute tally sheet (Figure 2) on which the teacher recorded his "On-Task" or "Off-Task" behavior at 10 second intervals. The "On and Off-Task" Teacher Behavior Checklist and the pre and post survey were designed for use in this study. The 10 minute tally sheet was an adaptation of a form used as part of a classroom competency in Classroom Management.*

Method. The filming procedure was explained to the teachers in order to eliminate some of the apprehension or anxiety about being filmed. It was described as a course requirement. At that time, permission to be filmed was obtained and the teachers were asked to fill out the pre-survey.

The teachers were then informed when they would be filmed for a pre-test. A chart, indicating filming and viewing times, was then posted. The teachers were informed that they must view their pre-test film before more filming could be done.

Each teacher viewed a 10 minute segment of his film twice. The first showing allowed the teacher to observe the general activity in the classroom. For some teachers, it was an initial exposure to being filmed and the first showing dispensed with any feelings of excitement or embarrassment. Prior to the second showing, the teachers were given the "On and Off-Task" behavior checklist to measure their knowledge of appropriate and inappropriate behaviors. After checking their answers with the answer key provided, the teachers used the checklist as a guideline for the second showing of their film. The focus of the second showing was to observe only the teacher's "On and Off-Task" behavior and to record the results.

In order to eliminate the problem of watching a stop clock and a television monitor simultaneously, a cassette tape gave a time signal every

*Designed by Geraldine Markel. Not copyrighted.

Observer_____ Type of Class_____ Age_____

Site_____ Teacher_____ Activity_____

Date_____ Number of Teachers_____ Others_____

OBSERVATION FORM

	10"		20"		30"		40"		50"		60"		Totals	
	T	NT	T	NT	T	NT	T	NT	T	NT	T	NT	T	NT
1st. min.														
2nd. min.														
3rd. min.														
4th. min.														
5th. min.														
6th. min.														
7th. min.														
8th. min.														
9th. min.														
10th. min.														

Task Behaviors Non-Task Behavior Comments

Describe the atmosphere in the classroom and reasons for your impressions.

Name_____

Figure 2. Tally Sheet for Evaluating Videotaped Teaching Behaviors.

10 seconds for 10 minutes. During the total viewing time, there was no instructor verbalization unless the teacher specifically requested it. In addition, a supervisor and several Reading and Learning Skills Center personnel viewed the same 10 minute segments in order to tabulate their evaluation of the teachers' performances.

The experimental group consisted of five teachers who had continued filmings. Each filming followed the same procedure: two showings of the 10 minute segment, required viewing prior to additional filming, and optional instructor participation.

A control group, consisting of two teachers chosen randomly, had pre and post test filming only. After all post test filmings and viewings were completed, the seven teachers were given the post-survey, asking the identical questions as the pre-survey.

RESULTS

The results of the survey on personal feelings and attitudes about videotaping (Table 1) indicated that the control teachers were essentially "neutral" on both the pre and post survey. (3.91 and 3.41) The experimental group were "neutral" (3.65) in their feelings and attitudes on the pre-survey and "enthusiastic" (4.20) in their post-survey. In the latter group, the apprehension expressed centered around self-perception (viewing oneself as others really see you) rather than apprehension centered around an observer's perception.

A comparison of responses of the control and experimental group to the presence of videotaping as an interfering factor in their performance was included in the survey. It was found that, in both the pre and post survey, the control group believed that videotaping would not hinder their performance. The experimental group indicated a "neutral" feeling in the pre-survey. The

post-survey results indicated that 96% of the subjects agreed that videotaping was not a hindrance to their performance.

The findings of the post-survey on opinions on the value of the project indicated that the control group was "neutral" in their views. Within the experimental group, 88% of the subjects found the use of videotaping, as feedback, "very helpful."

The results of the "On-Task" and "Off-Task" behavior Checklist (Table 2) showed that the control group scored 100% accuracy in labeling behaviors appropriately while the experimental group averaged 91%. Of the eighteen items on the checklist, the only one that was missed by more than one subject was item #7 which read "doing nothing." In distinguising between "On-Task" and "Off-Task" items on the checklist, the experimental group had made only one error in identifying an "On-Task" behavior while five "Off-Task" items were misidentified.

The results of the "On-Task and "Off-Task" Tally Sheet (Table 2) indicated that the control group found themselves "On-Task" 95.5% of the time and "Off-Task" 4.5% when viewing their pretest films. The same subjects found themselves performing "On-Task" 100% of the time in their post test films. The experimental group found themselves "On-Task" 86.6% of the time and "Off-Task" 13.4% in their pretest films. In their post test films, they found themselves "On-Task" 96.6% of the time and "Off-Task" 3.4%.

Supervisory personnel had slightly different results in their tabulations. According to their findings, the control group was "On-Task" only 78.5% of the time in pre test films and "Off-Task" 21.5%. The supervisory personnel did agree that they were "On-Task" 100% in the post test films. The experimental group was "On-Task" 83.2% of the time in pretest films and "Off-Task" 16.8%. In the post test films, they were "On-Task" 99.6% of the time and "Off-Task" .4%.

Table 1.

Pre-Post Results

C. = Control Group
E. = Experimental Group

	(apprehensive) 1	2	(neutral) 3	4	(enthusiastic) 5
I. Personal Feelings/Attitudes	C.(Pre)	C.(Post)	E.(Pre)		E.(Post)
1. How do you feel about being videotaped?	4.0	3.5	3.8		4.2
2. How do you feel about seeing yourself on tape?	4.0	3.5	3.6		4.4
3. How do you feel about hearing yourself on tape?	4.0	3.5	2.8		3.2
4. How do you feel about viewing the tape alone, without your supervisor seeing it?	2.5	3.0	3.5		4.2
5. How do you feel about having a supervisor reviewing the tape with you at your request?	4.5	3.5	4.0		4.6
6. How do you feel about viewing the tape with your supervisor?	4.5	3.5	4.2		4.6
Average	(3.91)	(3.41)	(3.65)		(4.20)
	(absolutely) 1	2	(neutral) 3	4	(not at all) 5
7. Do you feel the taping will prevent you as a teacher from giving a more natural presentation?	5.0	5.0	3.4		4.8

Table 1. (cont.)

Post Survey Results

C. = Control Group
E. = Experimental Group

II. Opinions About Value of Project	(useless) 1	2	(neutral) 3	4	(very helpful) 5
		C.(Post)		E.(Post)	
1. Was the staff's preparation for the taping adequate?		3.5		4.2	
2. How do you feel about evaluating your performance via videotape recording?		3.0		4.6	
3. Was the tape an adequate and helpful means of feedback?		3.0		4.6	
4. Was the video taping helpful in modification of your behavior?		2.5		4.8	
5. How do you feel about this task-non task criterion for evaluating your effectiveness?		3.0		3.8	
6. (Optional) Was the supervisor helpful in reviewing the tape with you?		3.0		4.3	
7. How do you feel about continuing the videotaping program for future 592 students?		3.0		4.8	
	Average	3.00		4.44	

Table 2.

Measurement of the Percentage of "On-Off Task" Teacher Behavior

CONTROL GROUP

Subjects (Supervisors)	Pretest			Posttest	
	On	Off		On	Off
A	100% (72%)	0% (28%)		100% (100%)	0% (0%)
B	91% (85%)	9% (15%)		100% (100%)	0% (0%)

EXPERIMENTAL GROUP

Subjects (Supervisors)	Pretest			Interim			Posttest	
	On	Off		On	Off		On	Off
A	95% (95%)	5% (5%)		98% (98%)	2% (2%)		100% (100%)	0% (0%)
B	55% (55%)	45% (45%)		93% (92%)	7% (8%)		88% (100%)	12% (0%)
C	98% (98%)	2% (2%)		96% (96%)	4% (4%)		100% (100%)	0% (0%)
D	85% (85%)	15% (15%)		92% (88%)	8% (12%)		98% (98%)	2% (2%)
E	100% (83%)	0% (17%)		99% (88%)	1% (12%)		97% (100%)	3% (0%)

SUMMARY

This paper describes the use of videotape as a form of immediate feedback to modify teaching behavior. The subjects involved in the study reported that videotaping was very beneficial both in creating awareness of interactions within the classroom and in modification of their "On-Task" behavior.

The identification of appropriate and inappropriate behaviors produced several observations. First, attending to "On-and Off-Task" behavior led one subject to comment that the teacher's own behavior can interfere with the client's learning ability, often creating a non-productive student. Next, experienced subjects were more aware of appropriate teacher behavior, although they did not put them into practice in the classroom. Lastly, those subjects (in the experimental group) who misidentified the "Off-Task" behavior of "doing nothing" on the behavior checklist were the same teachers who had "sat and stared at" the clients on the pretest films.

It was further noted that a discrepancy between the observations of the subjects with prior teaching experience and the observations of the supervisor's on the ten minute tally sheet was much wider than between the observations of the non-experienced subjects and the supervisor's.

It is concluded that a more extensive study of the use of videotape feedback is warranted, based on these essentially positive preliminary findings.

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